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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/612,450

07/01/2003

Jerry Joe Langin-Hooper

5427

7590

02/06/2007

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EXAMINER

TOLJENTINO, RODERICK

ART UNIT

PAPER NUMBER

2134

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/06/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/612,450	Applicant(s) LANGIN-HOOPER ET AL.	
	Examiner Roderick Tolentino	Art Unit 2134	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>07/07/2003</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1 – 10 are pending.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claim 7 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.
3. Claim 7, is directed towards an apparatus type of invention. However, there is no tangible structure to the claim recited in any of the limitations. An apparatus claim must recite limitations that give the invention physical structure. Further, the only limitation in the claim is a method step and again as recited in this format there must be a tangible structure recited.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1 and 4 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to

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which it pertains, or with which it is most nearly connected, to make and/or use the invention.

6. Claims 1 and 4, lack enablement by one of ordinary skill in the art for the following reason:

7. Both claims recite the limitation of creating a reversible transformation output but then the claim describes the output to also be non-reversible. It is unclear as to how this is can be done.

8. Further it is unclear as to how one of ordinary skill in the art is able to extract a plaintext from a transformed message. No steps are recited as to how the receiver party is able to extract a message. The plaintext as described in the specification and claims say that it is in a non-reversible form after transformation. However, the transformation is becoming reversed. It is unclear as to how this is possible.

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 1, 4, 7, 9 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. As per claims 1 and 4, limitations recite numerous times that a reversible transformation is also non-reversible at the same time. It is unclear as to how this is possible. Something cannot be reversible and non-reversible at the same time. For purposes of examination it will be interpreted to be reversible transformations.

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12. As per claim 7, limitation recites an apparatus. However, the claim as stated shows no structure that can be interpreted to be the apparatus.

13. As per claims 9 and 10, limitations recite the use of a message comprising a cryptographic key. However, the preamble clearly states that there is no cryptographic key exchange. If message comprises a key and is transmitted then the key is exchanged. For purposes of examination it will be interpreted to be that there is some key exchange present.

14. Claims 1 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are:

15. A step showing how a non-reversible transformation becomes reversed. It seems that an algorithm or key must be sent or to be had by both transmitter and receiver in order to perform a step of extraction or decryption.

Claim Rejections - 35 USC § 102

16. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

17. Claims 7 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Schneier's Applied Cryptography.

18. As per claims 7 and 8, Schneier discloses the plaintext message is transmitted to and understood by the receiving party, but cannot be understood by any third party who was privy to all transmissions between the transmitting party and the receiving party (Schneier, Pages 516 – 517).

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. Claims 1 – 6, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schneier's Applied Cryptography in view of Hellman et al. U.S. Patent No. (4,200,770).

21. As per claims 1 and 4, Schneier teaches first transformation means for embodying the plaintext message in a non-reversible first output; second transformation means for generating a second output which is a reversible second transformation of said first output, such that said second output is non-reversible (Schneier, Pages 516 – 517), third transformation means for generating a third output which is a reversible third transformation of said second output, such that said third output is non-reversible,

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reverse second transformation means for generating a fourth output through reversal of the second transformation applied to said third output, such that said fourth output is non-reversible, reverse third transformation means for generating said first output through reversal of the third transformation applied to said fourth output and extracting means for extracting the plaintext message from said first output in the possession of the receiving party (Schneier, Pages 516 – 517) but fails to teach a first transmitting means for transmitting said second output from the transmitting party to the receiving party second transmitting means for transmitting said third output from the receiving party to the transmitting party, third transmitting means for transmitting said fourth output from the transmitting party to the receiving party. However, in an analogous art Hellman teaches a first transmitting means for transmitting said second output from the transmitting party to the receiving party second transmitting means for transmitting said third output from the receiving party to the transmitting party, third transmitting means for transmitting said fourth output from the transmitting party to the receiving party (Hellman, Col. 3 Lines 41 – 55).

At the time the invention was made, it would have been obvious to use Hellman's cryptographic apparatus with Schneier's protocols because it offers the advantage of transmitting secure information.

22. As per claims 2 and 5, Schneier as modified teaches first transmitting means is also said third transmitting means (Hellman, Col. 3 Lines 41 – 55).

23. As per claims 3 and 6, Schneier as modified teaches first transformation means comprises a first mathematical function creating an embodiment of the plaintext

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message in a non-invertible first output; said second transformation means comprises an invertible second mathematical function; said third transformation means comprises an invertible third mathematical function; said reverse second transformation means comprises the inverse of said second mathematical function; and said reverse third transformation means comprises the inverse of said third mathematical function (Schneier, Pages 516 – 517).

24. As per claims 9 and 10, Schneier as modified teaches plaintext message comprises a cryptographic key (Schneier, Pages 516 – 517).

Conclusion

25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

26. Chang et al. U.S. Patent No. (5,724,425) discloses method for enhancing software security.

27. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roderick Tolentino whose telephone number is (571) 272-2661. The examiner can normally be reached on 8:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on (571) 272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Roderick Tolentino

Roderick Tolentino
Examiner
Art Unit 2134



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